

# THE CASSO-SOLAR BATCH LAMINATING PROCESS

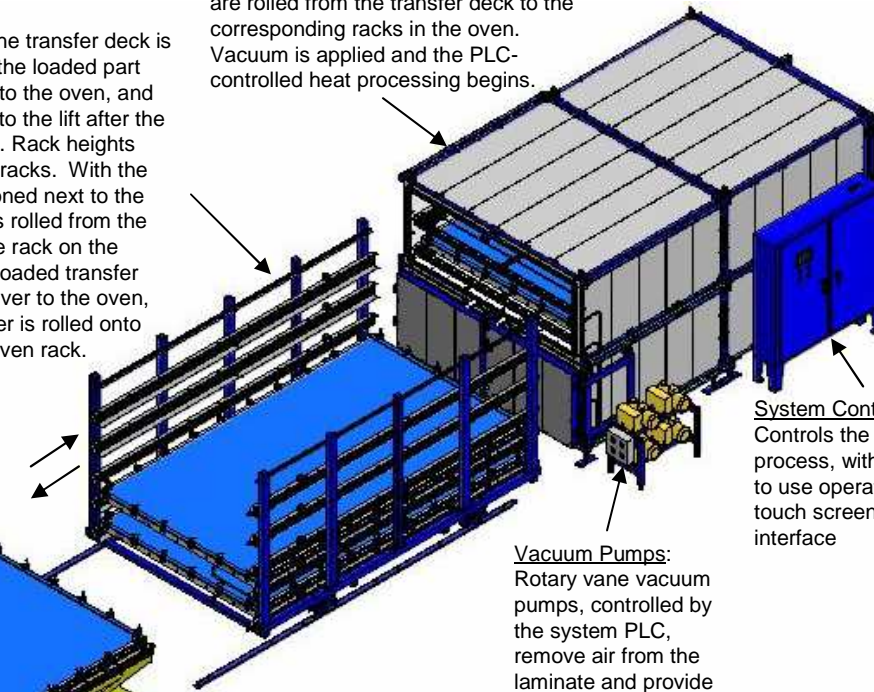
Product Bulletin G110  
Issued Dec 1, 2011



**E. Transfer Deck:** The transfer deck is designed to shuttle the loaded part carriers from the lift to the oven, and from the oven back to the lift after the process is complete. Rack heights correspond to oven racks. With the transfer deck positioned next to the lift, the part carrier is rolled from the lift to the appropriate rack on the transfer deck. The loaded transfer deck is then rolled over to the oven, where the part carrier is rolled onto the corresponding oven rack.

**F. Laminating Oven:** The part carriers are rolled from the transfer deck to the corresponding racks in the oven. Vacuum is applied and the PLC-controlled heat processing begins.

**C. Part Carrier:** Holds glass throughout the entire processing cycle. The glass is placed on the part carrier, which has a bottom silicone blanket stretched across it. A top blanket is pulled over the glass, and the blanket perimeter is mechanically sealed to form an air-tight vacuum environment. The part carrier is designed to roll easily from the lift, to the transfer deck, and onto the oven rack.

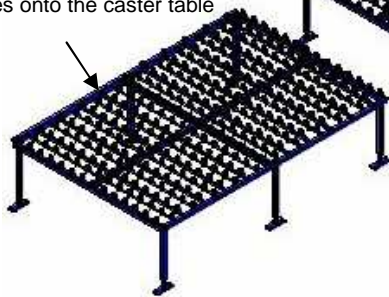


**System Controller:** Controls the entire process, with easy to use operator touch screen interface

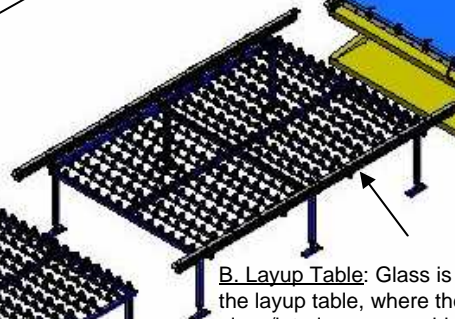
**Vacuum Pumps:** Rotary vane vacuum pumps, controlled by the system PLC, remove air from the laminate and provide curing pressure throughout the cycle.

Machine Direction

**A. Caster Table:** Glass exits the glass washer and glides onto the caster table



**B. Layup Table:** Glass is moved to the layup table, where the glass/interlayer assembly takes place. Interlayer material is placed between two (or more) sheets of glass. The edges of the glass are lined up, and excess interlayer is trimmed. The glass is then taped along the edges.



**D. Hydraulic Lift:** Once the glass has been properly sealed between the silicone blankets, the lift raises the part carrier to the desired rack height on the transfer deck. After the heating process is complete, the part carrier comes back to the lift, where the glass is unloaded and prepared for shipment.

## Typical Process Cycle:

1. Vacuum at room temp ("cold vacuum")
2. Controlled Temperature Ramp-Up
3. Hold Temperature
4. Cooling to below delamination temperature
5. Release vacuum / Cycle complete

